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10/523,012	02/01/2005	Joachim Moormann	3868-0160PUS1	7480

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
PALENIK, JEFFREY T	
ART UNIT	**PAPER NUMBER**
1615	

NOTIFICATION DATE	DELIVERY MODE
02/05/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/523,012	MOORMANN ET AL.	
	Examiner	Art Unit	
	Jeffrey T. Palenik	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1 Feb 2005, 15 Sept 2005, and 23 June 2006.

DETAILED ACTION

Response to Arguments

The Examiner thanks the Applicants for their timely reply filed on 12 December 2007, in the matter of 10/523,012.

Applicant's election with traverse of Group I, claims 1-9 is acknowledged. The traversal is on the beliefs that: 1.) per 37 CFR § 1.475(a) and the International Preliminary Examination Report (IPER), that the International Bureau maintains that a single inventive concept exists between the inventions of claims 1-19, 2.) per 37 CFR § 1.475(b)(2) that the claims should be rejoined since they are drawn to a product and a process of using said product, and 3.) that per MPEP 803, no serious burden has been placed on the Examiner.

This is not found persuasive because the burden of examination is based upon the lack of a unifying special technical feature between the presented Groups I and II. Per PCT Rule 13.1, the international application shall relate to a group of inventions so linked as to form a single general inventive concept or a "unity of invention" (see MPEP 1850). Per PCT Rule 13.2, said "unity of invention" is fulfilled by defining a special technical feature that is shared amidst the claimed inventions. Per MPEP 1850, since at least one of the independent claims does not avoid the prior art then the question whether there is still an inventive link between all of the claims remains. The Examiner's position is further supported by the IPER, which states under PCT Article 33(2) that the subject matter of claims 1, 2, 6 and 7 is not novel and that under PCT Article 33(3) the subject matter of claims 1-19 is not inventive. Per this Report, prior art exists against one or more of the independent claims.

The restriction requirement is still deemed proper and is therefore made FINAL.

Regarding Applicants' response to the Information Disclosure Statements (IDS) that have not yet been considered, the Examiner would like to assure Applicants that all three submitted IDS forms will be given proper consideration in accordance with MPEP 609 and 37 CFR 1.97(b)(3).

Claims 10-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected invention and species, there being no allowable generic or linking claim. Applicants timely traversed the restriction (lack of unity) requirement between the product and method of manufacturing.

The remaining claims 1-9 are presented and represent all claims under consideration.

Priority

This application is the National Stage filing of International Patent Application No. PCT/EP03/08236, filed 25 July 2003, and German Foreign Application 102 35 494.5, filed 3 August 2002. Examiner finds that Applicant's filing meets the priority requirements for the International Application, but not the Foreign Application.

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Acknowledgment is made of Applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Germany on 3 August 2002 (see Application Data Sheet). A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.

As such it is determined that the earliest effective U.S. filing date to be 25 July 2003.

Information Disclosure Statement

Three Information Disclosure Statements filed 1 February 2005, 15 September 2005, and 23 June 2006 are acknowledged and have been reviewed.

It should be noted that the non-patent literature (NPL) reference to Optiz was not considered since it does not appear to have been submitted by Applicant.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it refers to non-elected subject matter. Correction is required. See MPEP § 608.01(b).

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2 and 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 9 recite different limitations which follow the phrase "can be". In the case of claim 1, the recitation "which can be administered independently", refers to the relation of administration of the rapid entry form to the continuous release form of the medicament. It is not clear whether independent administration is part of the claimed invention.

Similarly, claim 9 recites that the rapid entry form of the dose "can be sprayed or dripped into the nose." It is not clear whether this limitation is part of the invention, since application of a liquid formulation by way of a nozzle does not necessitate pernasal spraying or dripping.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 2 recites the broad recitation "galanthamine, the pharmaceutically acceptable salts of galanthamine, nicotine, and the

pharmaceutically acceptable salts of nicotine", and the claim also recites "with galanthamine being preferred", which is the narrower statement of the range/limitation.

The recitation "consisting of solid, biocompatible matrices quickly soluble in saliva, buccal solutions, as well as spray or drip solutions" in claim 7, is unclear. The limitations to the format of the rapid entry administration form are able to be construed in several different manners (i.e. solid, biocompatible matrix form versus a solid form or a biocompatible matrix form). Clarification is required. For the purposes of examination on the merits, the limitations of the instant claim 7 are given their broadest reasonable interpretation herein (i.e. solid form, biocompatible form, etc.).

The recitation regarding the administration form "for solutions" in claim 8, is not clear because it is not specified which solutions of the previous claim (e.g. buccal, spray or drip) are to be packaged into the flexible plastic container of the present claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by McGee et al. (U.S. Patent 7,160,559).

It should be noted that U.S. Patent 7,160,559 is the U.S. filing of International Application number PCT/EP99/10257 and was published as WO 2000/38686, on 6 July 2000.

The instant claims are directed to a composition consisting of two administration forms: 1.) an administration form that continuously releases at least one modulator of nicotinic receptors and 2.) an administration form which enables a rapid entry of galanthamine or one of its salts in to the Central Nervous System (claim 1). The dependent claim 2 further limits the modulator of nicotinic receptors in the continuous release form to galanthamine, nicotine, or their respective pharmaceutically acceptable salts with a preference towards galanthamine. The dependent claim 3 further limits the continuous release administration form to transdermal therapeutic systems, subcutaneous implants or intramuscularly injectible preparations. The independent claim 5 further limits the continuous release administration form to either release between 10 and 25 mg of galanthamine or a pharmaceutically acceptable salt of it, or between 5 and 50 mg of nicotine or a pharmaceutically acceptable salt of it. The dependent claim 6 further limits the quick entry administration form of the composition such that it contains 1 to 5 mg of galanthamine or a pharmaceutically acceptable salt of it. The dependent claim 7 further limits the form of the quick entry administration form to a solid, a saliva-soluble biocompatible matrix, a buccal solution, a spray solution or a drip solution.

McGee et al. teaches a controlled release formulation containing galanthamine as the active ingredient characterized in that it comprises particles comprising galanthamine hydrobromide and a saliva-soluble, biocompatible matrix (i.e. water soluble film-forming polymer) (claim 1). The drug formulation contains galanthamine not only in a sustained release formulation but in an immediate release administration form as well. The immediate release form being comprised of the galanthamine-based particles encased within the film-forming polymer. The broadest reasonable interpretation of the claim is that though both administration

forms would first need to be removed from the capsule, but could still be administered separately (see IPER). McGee teaches by way of example, at col. 1, lines 60-67, that galanthamine has been employed in transdermal therapeutic systems to treat alcoholism and nicotine. Release of 10-25 mg from individual dosages of galanthamine is taught (col. 8, lines 24-25). Release of 1-5 mg of galanthamine from each of the individual dosages is also taught (col. 8, lines 22-23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGee et al. (U.S. Patent 7,160,559) in view of Plata-Salaman (U.S. Pre-grant Publication 2003/0060423).

The instant claims are directed to a composition consisting of two administration forms, as described above. The dependent claim 4 further limits the composition of claim 3 such that

the intramuscularly injectible preparation is a suspension of microcapsules containing the modulator(s). The dependent claim 8 further limits claim 7 such that the administration format for the rapid entry form is a flexible plastic container having a capacity between 1-5 mL. Claim 9 further limits claim 8 such that said plastic container is provided with nozzles through which the solution can be sprayed or dripped intranasally.

McGee et al. teaches a controlled release, galanthamine formulation, as described above. McGee further teaches galanthamine dosage packages that are adaptable for different "acetylcholine esterase inhibitor naïve" patients. Said packages are taught to comprise different tiers of regimens that increase the amount of galanthamine per tier up to 40 mg (col. 8, lines 9-35). The specific release ranges of 10-25 mg of galanthamine (and its salts) and/or 5-50 mg of nicotine (and its salts), are not taught. McGee et al. also teach in claim 1, the formulation as an encapsulation of particles which further encapsulate the active agent galanthamine hydrobromide. However, a flexible plastic container having a 1-5 mL capacity with nozzles is not taught.

Plata-Salaman teaches co-therapy compositions comprising a therapeutically effective amount of one or more acetylcholinesterase inhibitors [0018, 0071] such as galanthamine [0055]. Administration of galanthamine is taught to range from about 2 to about 32 mg daily and more preferably from about 4 to about 24 mg once or twice daily [0070]. The term "co-therapy," as defined in [0033], refers to at least one compound of a general "formula I" being administered with at least one acetylcholinesterase inhibitor wherein said compound(s) and inhibitor(s) are administered simultaneously, sequentially, separately or in a single pharmaceutical formulation. Instances where dosing does not occur in a single formulation, the routes of administration may

be varied and include: intramuscular, transdermal, subcutaneous, as well as being directly applied to the nervous system. Topical, intranasal administration of the active agent is also taught [0076]. Unit dose forms such as tablets, pills, and capsules, each of which include immediate-, timed-, and sustained release formats, are taught [0072]. Additional dosing systems and formats such as injected (e.g. parenteral) suspensions, metered liquid sprays, drops, ampoules, and autoinjector devices are taught [0072], each of whose design is capable of incorporating distribution nozzles.

In view of the combined teachings of the prior art, one of ordinary skill in the art would have been motivated to administer dosage regimens comprising galanthamine with a reasonable expectation of successfully treating addictive craving conditions in a human. McGee et al. teach that the use of galanthamine is well known in the art for treating such addictions as alcoholism and nicotine dependence (col. 1, lines 60-67). Therefore, modification of the instant medicament formulation to include different "co-therapy" release formats (i.e. simultaneous or separate administration), routes of administration, and dosing formats (i.e. ampoules or drops) as earlier defined is well within the purview of the skilled artisan. Furthermore, a person of ordinary skill in the art would have been motivated, with minimal undue experimentation, to create the necessary result-effective modifications to enable a nozzle-endowed, dosing format to release 1-5 mL of the galanthamine composition through adjustment of manufacturing parameters of said format and reasonably would have expected success because the prior art dealt with the same subject matter of co-therapy, immediate- and sustained-release of a galanthamine formulation.

Neither reference teaches the dosing amounts of the active ingredient in the composition in the amounts claimed by the Applicants. Since the release amounts of each ingredient of the claimed dosage form is adjustable, it follows that each is a result-effective parameter that a person having ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. It would have been customary for an artisan of ordinary skill to determine the optimal amount of active ingredient(s) to add to the dosage formulation in order to best achieve the desired results. Thus, absent some demonstration of unexpected results from the claimed parameters, optimization of any of these ingredient amounts would have been obvious at the time of Applicant's invention.

No claims are allowed.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey T. Palenik whose telephone number is (571) 270-1966. The examiner can normally be reached on 7:30 am - 5:00 pm; M-F (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be

obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey T. Palenik
Patent Examiner

MICHAEL P. WOODWARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600